

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/800,187

DATE: 10/29/2001

TIME: 15:13:38

Input Set : A:\Huv03701.app

Output Set: N:\CRF3\10292001\I800187.raw

3 <110> APPLICANT: GROZINGER, CHRISTINA M.  
4 HASSIG, CHRISTIAN A.  
5 SCHREIBER, STUART L.  
7 <120> TITLE OF INVENTION: CLASS II HUMAN HISTONE DEACETYLASES, AND USES RELATED  
8 THERETO  
10 <130> FILE REFERENCE: HUV-037.01  
12 <140> CURRENT APPLICATION NUMBER: 09/800,187  
13 <141> CURRENT FILING DATE: 2001-03-05  
15 <150> PRIOR APPLICATION NUMBER: 60/186,802  
16 <151> PRIOR FILING DATE: 2000-03-03  
18 <160> NUMBER OF SEQ ID NOS: 73  
20 <170> SOFTWARE: PatentIn Ver. 2.1  
22 <210> SEQ ID NO: 1  
23 <211> LENGTH: 3255  
24 <212> TYPE: DNA  
25 <213> ORGANISM: Homo sapiens  
27 <400> SEQUENCE: 1

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30 caagtggccc cctcggcagt gcccatggac ctgcgccctgg accaccagt ctactgcct 180  
31 gtggcagagc cggccctgcg ggagcagcag ctgcagcagg agctcctggc gctcaagcag 240  
32 aagcagcaga tccagaggca gatcctcatc gctgagttcc agaggcagca cgagcagctc 300  
33 tcccggcagc acgaggcgca gctccacgag cacatcaagc aacaacagga gatgctggcc 360  
34 atgaagcacc agcaggagct gctggaacac cagcgggaagc tggagaggca ccgccaggag 420  
35 caggagctgg agaagcagca ccgggagcag aagctgcagc agctcaagaa caaggagaag 480  
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40 cttaggaaaa cagcttctga accgaatctg aaattacggt ccaggctaaa gcagaaagt 780  
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46 accggcccct ctgcgggcac ggcggggcag caggacaccg agagactcac ccttcccgcc 1140  
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ENTERED

P.5

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58 cggatccacc agctgaggaa ctaccaggcg tccatggagg ccgcccggcat ccccggtgtcc 1860
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60 gtgtctgtgc aggagccccc caccaagccg aggttcacga caggcctcgt gtatgacacg 1980
61 ctgatgctga agcaccagtg cacctgcggg agtagcagca gccaccccga gcacgccggg 2040
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87 &lt;212&gt; TYPE: PRT

88 &lt;213&gt; ORGANISM: Homo sapiens

90 &lt;400&gt; SEQUENCE: 2

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94 Val Glu Leu Leu Asn Pro Ala Arg Val Asn His Met Pro Ser Thr Val
95 20 25 30
97 Asp Val Ala Thr Ala Leu Pro Leu Gln Val Ala Pro Ser Ala Val Pro
98 35 40 45
100 Met Asp Leu Arg Leu Asp His Gln Phe Ser Leu Pro Val Ala Glu Pro
101 50 55 60
103 Ala Leu Arg Glu Gln Gln Leu Gln Gln Glu Leu Leu Ala Leu Lys Gln
104 65 70 75 80
106 Lys Gln Gln Ile Gln Arg Gln Ile Leu Ile Ala Glu Phe Gln Arg Gln
107 85 90 95
109 His Glu Gln Leu Ser Arg Gln His Glu Ala Gln Leu His Glu His Ile
110 100 105 110
112 Lys Gln Gln Gln Glu Met Leu Ala Met Lys His Gln Gln Glu Leu Leu
113 115 120 125
115 Glu His Gln Arg Lys Leu Glu Arg His Arg Gln Glu Gln Glu Leu Glu
116 130 135 140
118 Lys Gln His Arg Glu Gln Lys Leu Gln Gln Leu Lys Asn Lys Glu Lys

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| 119 | 145 |     |     |     | 150 |     |     |     | 155 |     |     |     | 160 |     |     |     |
| 121 | Gly | Lys | Glu | Ser | Ala | Val | Ala | Ser | Thr | Glu | Val | Lys | Met | Lys | Leu | Gln |
| 122 |     |     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |
| 124 | Glu | Phe | Val | Leu | Asn | Lys | Lys | Lys | Ala | Leu | Ala | His | Arg | Asn | Leu | Asn |
| 125 |     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| 127 | His | Cys | Ile | Ser | Ser | Asp | Pro | Arg | Tyr | Trp | Tyr | Gly | Lys | Thr | Gln | His |
| 128 |     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| 130 | Ser | Ser | Leu | Asp | Gln | Ser | Ser | Pro | Pro | Gln | Ser | Gly | Val | Ser | Thr | Ser |
| 131 |     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| 133 | Tyr | Asn | His | Pro | Val | Leu | Gly | Met | Tyr | Asp | Ala | Lys | Asp | Asp | Phe | Pro |
| 134 | 225 |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     | 240 |     |
| 136 | Leu | Arg | Lys | Thr | Ala | Ser | Glu | Pro | Asn | Leu | Lys | Leu | Arg | Ser | Arg | Leu |
| 137 |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     |     | 255 |     |
| 139 | Lys | Gln | Lys | Val | Ala | Glu | Arg | Arg | Ser | Ser | Pro | Leu | Leu | Arg | Arg | Lys |
| 140 |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| 142 | Asp | Gly | Pro | Val | Val | Thr | Ala | Leu | Lys | Lys | Arg | Pro | Leu | Asp | Val | Thr |
| 143 |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| 145 | Asp | Ser | Ala | Cys | Ser | Ser | Ala | Pro | Gly | Ser | Gly | Pro | Ser | Ser | Pro | Asn |
| 146 |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| 148 | Asn | Ser | Ser | Gly | Ser | Val | Ser | Ala | Glu | Asn | Gly | Ile | Ala | Pro | Ala | Val |
| 149 | 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     | 320 |     |
| 151 | Pro | Ser | Ile | Pro | Ala | Glu | Thr | Ser | Leu | Ala | His | Arg | Leu | Val | Ala | Arg |
| 152 |     |     |     | 325 |     |     |     |     | 330 |     |     |     |     |     | 335 |     |
| 154 | Glu | Gly | Ser | Ala | Ala | Pro | Leu | Pro | Leu | Tyr | Thr | Ser | Pro | Ser | Leu | Pro |
| 155 |     |     |     | 340 |     |     |     |     | 345 |     |     |     |     | 350 |     |     |
| 157 | Asn | Ile | Thr | Leu | Gly | Leu | Pro | Ala | Thr | Gly | Pro | Ser | Ala | Gly | Thr | Ala |
| 158 |     |     | 355 |     |     |     |     | 360 |     |     |     |     | 365 |     |     |     |
| 160 | Gly | Gln | Gln | Asp | Thr | Glu | Arg | Leu | Thr | Leu | Pro | Ala | Leu | Gln | Gln | Arg |
| 161 |     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| 163 | Leu | Ser | Leu | Phe | Pro | Gly | Thr | His | Leu | Thr | Pro | Tyr | Leu | Ser | Thr | Ser |
| 164 | 385 |     |     |     | 390 |     |     |     |     |     | 395 |     |     |     | 400 |     |
| 166 | Pro | Leu | Glu | Arg | Asp | Gly | Gly | Ala | Ala | His | Ser | Pro | Leu | Leu | Gln | His |
| 167 |     |     |     | 405 |     |     |     |     | 410 |     |     |     |     |     | 415 |     |
| 169 | Met | Val | Leu | Leu | Glu | Gln | Pro | Pro | Ala | Gln | Ala | Pro | Leu | Val | Thr | Gly |
| 170 |     |     |     | 420 |     |     |     |     | 425 |     |     |     |     | 430 |     |     |
| 172 | Leu | Gly | Ala | Leu | Pro | Leu | His | Ala | Gln | Ser | Leu | Val | Gly | Ala | Asp | Arg |
| 173 |     |     | 435 |     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |
| 175 | Val | Ser | Pro | Ser | Ile | His | Lys | Leu | Arg | Gln | His | Arg | Pro | Leu | Gly | Arg |
| 176 |     | 450 |     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     |
| 178 | Thr | Gln | Ser | Ala | Pro | Leu | Pro | Gln | Asn | Ala | Gln | Ala | Leu | Gln | His | Leu |
| 179 | 465 |     |     |     | 470 |     |     |     |     |     | 475 |     |     |     | 480 |     |
| 181 | Val | Ile | Gln | Gln | Gln | His | Gln | Gln | Phe | Leu | Glu | Lys | His | Lys | Gln | Gln |
| 182 |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     |     | 495 |     |
| 184 | Phe | Gln | Gln | Gln | Gln | Leu | Gln | Met | Asn | Lys | Ile | Ile | Pro | Lys | Pro | Ser |
| 185 |     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |     |     |
| 187 | Glu | Pro | Ala | Arg | Gln | Pro | Glu | Ser | His | Pro | Glu | Glu | Thr | Glu | Glu | Glu |
| 188 |     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |     |     |     |
| 190 | Leu | Arg | Glu | His | Gln | Ala | Leu | Leu | Asp | Glu | Pro | Tyr | Leu | Asp | Arg | Leu |
| 191 |     | 530 |     |     |     |     | 535 |     |     |     |     | 540 |     |     |     |     |

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197                               565                               570                               575
199 Glu Pro Gly Gln Arg Gln Pro Ser Glu Gln Glu Leu Leu Phe Arg Gln
200                               580                               585                               590
202 Gln Ala Leu Leu Glu Gln Gln Arg Ile His Gln Leu Arg Asn Tyr
203                               595                               600                               605
205 Gln Ala Ser Met Glu Ala Ala Gly Ile Pro Val Ser Phe Gly Gly His
206                               610                               615                               620
208 Arg Pro Leu Ser Arg Ala Gln Ser Ser Pro Ala Ser Ala Thr Phe Pro
209 625                               630                               635                               640
211 Val Ser Val Gln Glu Pro Pro Thr Lys Pro Arg Phe Thr Thr Gly Leu
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214 Val Tyr Asp Thr Leu Met Leu Lys His Gln Cys Thr Cys Gly Ser Ser
215                               660                               665                               670
217 Ser Ser His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser Arg
218                               675                               680                               685
220 Leu Gln Glu Thr Gly Leu Arg Gly Lys Cys Glu Cys Ile Arg Gly Arg
221                               690                               695                               700
223 Lys Ala Thr Leu Glu Glu Leu Gln Thr Val His Ser Glu Ala His Thr
224 705                               710                               715                               720
226 Leu Leu Tyr Gly Thr Asn Pro Leu Asn Arg Gln Lys Leu Asp Ser Lys
227                               725                               730                               735
229 Lys Leu Leu Gly Ser Leu Ala Ser Val Phe Val Arg Leu Pro Cys Gly
230                               740                               745                               750
232 Gly Val Gly Val Asp Ser Asp Thr Ile Trp Asn Glu Val His Ser Ala
233                               755                               760                               765
235 Gly Ala Ala Arg Leu Ala Val Gly Cys Val Val Glu Leu Val Phe Lys
236                               770                               775                               780
238 Val Ala Thr Gly Glu Leu Lys Asn Gly Phe Ala Val Val Arg Pro Pro
239 785                               790                               795                               800
241 Gly His His Ala Glu Glu Ser Thr Pro Met Gly Phe Cys Tyr Phe Asn
242                               805                               810                               815
244 Ser Val Ala Val Ala Ala Lys Leu Leu Gln Gln Arg Leu Ser Val Ser
245                               820                               825                               830
247 Lys Ile Leu Ile Val Asp Trp Asp Val His His Gly Asn Gly Thr Gln
248                               835                               840                               845
250 Gln Ala Phe Tyr Ser Asp Pro Ser Val Leu Tyr Met Ser Leu His Arg
251                               850                               855                               860
253 Tyr Asp Asp Gly Asn Phe Phe Pro Gly Ser Gly Ala Pro Asp Glu Val
254 865                               870                               875                               880
256 Gly Thr Gly Pro Gly Val Gly Phe Asn Val Asn Met Ala Phe Thr Gly
257                               885                               890                               895
259 Gly Leu Asp Pro Pro Met Gly Asp Ala Glu Tyr Leu Ala Ala Phe Arg
260                               900                               905                               910
262 Thr Val Val Met Pro Ile Ala Ser Glu Phe Ala Pro Asp Val Val Leu
263                               915                               920                               925
265 Val Ser Ser Gly Phe Asp Ala Val Glu Gly His Pro Thr Pro Leu Gly

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266      930      935      940
268 Gly Tyr Asn Leu Ser Ala Arg Cys Phe Gly Tyr Leu Thr Lys Gln Leu
269 945      950      955      960
271 Met Gly Leu Ala Gly Gly Arg Ile Val Leu Ala Leu Glu Gly Gly His
272      965      970      975
274 Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ser Ala Leu
275      980      985      990
277 Leu Gly Asn Glu Leu Asp Pro Leu Pro Glu Lys Val Leu Gln Gln Arg
278      995      1000      1005
280 Pro Asn Ala Asn Ala Val Arg Ser Met Glu Lys Val Met Glu Ile His
281      1010      1015      1020
283 Ser Lys Tyr Trp Arg Cys Leu Gln Arg Thr Thr Ser Thr Ala Gly Arg
284 1025      1030      1035      1040
286 Ser Leu Ile Glu Ala Gln Thr Cys Glu Asn Glu Glu Ala Glu Thr Val
287      1045      1050      1055
289 Thr Ala Met Ala Ser Leu Ser Val Gly Val Lys Pro Ala Glu Lys Arg
290      1060      1065      1070
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293      1075      1080
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297 <211> LENGTH: 3369
298 <212> TYPE: DNA
299 <213> ORGANISM: Homo sapiens
301 <400> SEQUENCE: 3
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304 gccatgcccc gttccatggg ggggtgggggt ggaggcagcc ccagccctgt ggagctacgg 180
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312 ggcggcctca accattccct cccacagcac cccaaatgct ggggagccca ccatgcttct 660
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326 atgcggacgg taggcaagct cccgcggcat cggccctga gccgcactca gtctcaccg 1500

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Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

## VERIFICATION SUMMARY

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L:979 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:982 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:985 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:988 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:991 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:1560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:1598 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19  
L:1627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:1656 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21  
L:1680 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22  
L:1719 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23  
L:1738 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24  
L:1757 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25